

## Claims

1. Method for transmitting service messages in a fixed and/or mobile network wherein a service message (SN) intended for a terminal (EG) as the addressee is available in a service center (SZ1...SZ5), having the following features:

- a) A server (SV) is connected via a packet-switched first connection (V1) to the service center (SZ1...SZ5) and via a packet-switched second connection (V2) to the terminal (EG), with the terminal (EG) and server (SV) forming a communication system (KS),
- b) the terminal (EG) registers with the server (SV), notifies it of a fixed/mobile network specific network address (NAD) which is stored by the server (SV) and forwarded to the service center (SZ1...SZ5), and, in response, receives an access authorization (ZGB) from the server (SV),
- c) the terminal (EG) logs on to the server (SV) and notifies it of, alongside a communication system address (KSAD), device information (GIF) and control information (STIF) for server-side parameterizing and configuring of the communication system (KS) and system communication, with said communication system address (KSAD) being stored in the server (SV),
- d) the server (SV) accepts the service message (SN) from the service center (SZ1...SZ5) in accordance with a pre-specified server/service center specific transmission protocol (SMTP, MM1...MM7),
- e) using the device information (GIF) and by means of the control information (STIF), the server (SV) performs terminal-specific parameterizing of terminal-specific configuration templates (KfV) stored in the server (SV) and generates a terminal-specifically parameterized configuration profile (KfP), referred to as a "style sheet", which is stored in the server (SV) together with the communication system address (KSAD),

- f) the server (SV) stores the service message (SN) accepted from the service center (SZ1...SZ5), disassembles said service message (SN) into its individual components, analyzes its structure and/or the respective semantic meaning of the components, stores the results obtained as formatted structure information (SIF), identifies the addressee of the service message (SN), and sends a notification message (MN) to the identified addressee or, as the case may be, terminal (EG) to notify him/her/it of the received service message (SN) with an addressing scheme (URL) for collecting the content of the service message (SN) stored on the server (SV),
- g) in accordance with the addressing scheme (URL) in the notification message (MN), the terminal (EG) retrieves the content of the service message (SN) stored on the server (SV) by means of a retrieval request (AAF) conveyed to the server (SV),
- h) on the basis of the received retrieval request (AAF) the server (SV) produces a presentation message (PN), based on a pre-specified presentation format, from the service message (SN) using the formatted structure information (SIF) and the terminal-specific configuration profile (KFP), and conveys said presentation message (PN) to the terminal (EG),
- i) the terminal (EG) presents the received presentation message (PN) acoustically, graphically, and/or optically.

2. Method for transmitting service messages in a fixed and/or mobile network wherein a terminal (EG) has, as the sender, generated a message content of a service message (SN) intended for a subscriber in the fixed and/or mobile network, having the following features:

- a) A server (SV) is connected via a packet-switched first connection (V1) to the service center (SZ1...SZ5) and via a packet-switched second connection (V2) to the terminal (EG), with the terminal (EG) and server (SV) forming a communication

system (KS),

b) the terminal (EG) registers with the server (SV), notifies it of a fixed/mobile network-specific network address (NAD) which is stored by the server (SV) and forwarded to the service center (SZ1...SZ5), and, in response, receives an access authorization (ZGB) from the server (SV),

c) the terminal (EG) logs on to the server (SV) and notifies it of, alongside a communication system address (KSAD), device information (GIF), with said communication system address (KSAD) being stored in the server (SV),

d) using the device information (GIF) of which it has been notified, the server (SV) produces a service message generating template (SNEV), based on a pre-specified presentation format, for generating the service message (SN), and conveys said service message generating template (SNEV) to the terminal (EG),

e) the terminal (EG) transfers the generated message content to the received service message generating template (SNEV) and conveys the service message generating template (SNEV), augmented with the message content, to the server (SV) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP),

f) the server (SV) generates the service message (SN) from the service message generating template (SNEV) furnished with the message content and transmits said service message (SN) intended for the subscriber in the fixed and/or mobile network to the service center (SZ1...SZ5).

3. Method for transmitting service messages in a fixed and/or mobile network wherein a service message (SN) intended for a terminal (EG) as the addressee is available from a service center (SZ1...SZ5), having the following features:

a) A first server (SV1) is connected via a packet-switched first connection (V1) to the service center (SZ1...SZ5) and via

a packet-switched second connection (V2) to a second server (SV2), with the first server (SV1) and the second server (SV2) forming a first communication system (KS1),

b) the second server (SV2) is connected via a packet-switched third connection (V3) to the terminal (EG), with the terminal (EG) and the second server (SV2) forming a second communication system (KS2),

c) the second server (SV2) registers with the first server (SV1), notifies it of a fixed/mobile network-specific network address (NAD) which is stored by the first server (SV1) and forwarded to the service center (SZ1...SZ5), and, in response, receives an access authorization (ZGB) from the first server (SV1),

d) the second server (SV2) logs on to the first server (SV1) and notifies it of a first communication system address (KSAD1) which is stored in the first server (SV1),

e) the first server (SV1) accepts the service message (SN) from the service center (SZ1...SZ5) in accordance with a pre-specified server/service center-specific transmission protocol (SMTP, MM1...MM7) and forwards it to the second server (SV2) which stores the forwarded service message (SN),

f) the terminal (EG) logs on to the second server (SV2) and notifies it of, alongside a second communication system address (KSAD2), device information (GIF) and control information (STIF) for server-side parameterizing and configuring of the second communication system (KS2) and system communication, with the second communication system address (KSAD2) being stored in the second server (SV2),

g) using the device information (GIF) and by means of the control information (STIF), the second server (SV2) performs terminal-specific parameterizing of terminal-specific configuration templates (KFV) stored in the second server (SV2) and generates a terminal-specifically parameterized configuration profile (KFP), referred to as a "style sheet",

which is stored in the second server (SV2) together with the second communication system address (KSAD2),

- h) the second server (SV2) disassembles the service message (SN) which has been received from the first server (SV1) and stored into its individual components, analyzes its structure and/or the respective semantic meaning of the components, stores the results obtained as formatted structure information (SIF), identifies the addressee of the service message (SN), and sends a notification message (MN) to the identified addressee or, as the case may be, terminal (EG) to notify him/her/it of the received service message (SN) with an addressing scheme (URL) for collecting the content of the service message (SN) stored on the second server (SV2),
- i) in accordance with the addressing scheme (URL) in the notification message (MN), the terminal (EG) retrieves the content of the service message (SN) stored on the second server (SV2) by means of a retrieval request (AAF) conveyed to the second server (SV2),
- j) on the basis of the received retrieval request (AAF) the second server (SV2) produces a presentation message (PN), based on a pre-specified presentation format, from the service message (SN) using the formatted structure information (SIF) and the terminal-specific configuration profile (KFP), and conveys said presentation message (PN) to the terminal (EG),
- k) the terminal (EG) presents the received presentation message (PN) acoustically, graphically, and/or optically.

4. Method for transmitting service messages in a fixed and/or mobile network wherein a terminal (EG) has, as the sender, generated a message content of a service message (SN) intended for a subscriber in the fixed and/or mobile network, having the following features:

- a) A first server (SV1) is connected via a packet-switched first connection (V1) to a service center (SZ1...SZ5) and via a

packet-switched second connection (V2) to a second server (SV2), with the first server (SV1) and the second server (SV2) forming a first communication system (KS1),

b) the second server (SV2) is connected via a packet-switched third connection (V3) to the terminal (EG), with the terminal (EG) and the second server (SV2) forming a second communication system (KS2),

c) the second server (SV2) registers with the first server (SV1), notifies it of a fixed /mobile network-specific network address (NAD) which is stored by the first server (SV1) and forwarded to the service center (SZ1...SZ5), and, in response, receives an access authorization (ZGB) from the first server (SV1),

d) the second server (SV2) logs on to the first server (SV1) and notifies it of a first communication system address (KSAD1) which is stored in the first server (SV1),

e) the terminal (EG) logs on to the second server (SV2) and notifies it of, alongside a second communication system address (KSAD2), device information (GIF), with the second communication system address (KSAD2) being stored in the second server (SV2),

f) using the device information (GIF) the second server (SV2) produces a service message generating template (SNEV), based on a pre-specified presentation format, for generating the service message (SN), and conveys said service message generating template (SNEV) to the terminal (EG),

g) the terminal (EG) transfers the generated message content to the received service message generating template (SNEV) and conveys the service message generating template (SNEV), augmented with the message content, to the second server (SV2) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP),

h) the second server (SV2) generates the service message (SN) from the service message generating template (SNEV) furnished

with the message content and transmits said service message (SN) intended for the subscriber in the fixed and/or mobile network to the first server (SV1), which forwards said service message (SN) to the service center (SZ1...SZ5).

5. Method according to claim 1 characterized in that the terminal (EG) has, as the sender, generated a message content of a further service message (SN) intended for a subscriber in the fixed and/or mobile network, wherein

a) using the device information (GIF) the server (SV) produces a service message generating template (SNEV), based on a pre-specified presentation format, for generating the further service message (SN), and conveys said service message generating template (SNEV) to the terminal (EG),

b) the terminal (EG) transfers the generated message content to the received service message generating template (SNEV) and conveys the service message generating template (SNEV), augmented with the message content, to the server (SV) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP),

c) the server (SV) generates the further service message (SN) from the service message generating template (SNEV) furnished with the message content and transmits said further service message (SN) intended for the subscriber in the fixed and/or mobile network to the service center (SZ1...SZ5).

6. Method according to claim 3 characterized in that the terminal (EG) has, as the sender, generated a message content of a further service message (SN) intended for a subscriber in the fixed and/or mobile network, wherein

a) using the device information (GIF) the second server (SV2) produces a service message generating template (SNEV), based on a pre-specified presentation format, for generating the further service message (SN), and conveys said service message

generating template (SNEV) to the terminal (EG),

b) the terminal (EG) transfers the generated message content to the received service message generating template (SNEV) and conveys the service message generating template (SNEV), augmented with the message content, to the second server (SV2) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP),

c) the second server (SV2) generates the further service message (SN) from the service message generating template (SNEV) furnished with the message content and transmits said further service message (SN) intended for the subscriber in the fixed and/or mobile network to the first server (SV1), which forwards said service message (SN) to the service center (SZ1...SZ5).

7. Method according to claim 3, 4 or 6 characterized in that the second server (SV2) is integrated in the terminal (EG) for forming a structural and functional unit.

8. Method according to one of claims 1 to 4 characterized in that a "Transmission Control Protocol/Internet Protocol (TCP/IP)" is handled via the connections (V1, V2, V3).

9. Method according to claim 8 characterized in that a telephone number, an e-mail address, a "Session Initiation Protocol (SIP)" address etc. are used in the sense of a "Universal Resource Identifier (URI)" as the network address (NAD) and an IP address is used as the communication system address (KSAD, KSAD1, KSAD2).

10. Method according to one of claims 1 to 4 or according to claim 7 characterized in that a set-top box (STB) in conjunction with a television set (FA), with a smart telephone (STF) and/or with a "Personal Digital Assistant" (PDA), a



cordless base station (BS) embodied as an "access point" in conjunction with a personal computer (PC), with a smart telephone (STF), with a "Personal Digital Assistant" (PDA) and/or with a set-top box having a connected television set (FA), a personal computer (PC), a smart telephone (STF) or a "Personal Digital Assistant" (PDA) are used as the terminal (EG).

11. Method according to one of claims 1 to 4 characterized in that the device information (GIF) indicates the type, characteristics, and/or features of the terminal (EG).

12. Method according to one of claims 1 to 4 characterized in that the control information (STIF) indicates a password, the type and scope of a notification message (MN), a personal profile of the terminal user and/or personal preferences of the terminal user.

13. Method according to one of claims 1 to 6 characterized in that a "Simple Mail Transfer Protocol (SMTP)" is used as the server/service center-specific protocol (SMTP, MM1...MM7) and a "HyperText Transfer Protocol (HTTP)" or "Session Initiation Protocol (SIP)" is used as the server-/terminal-specific protocol (HTTP, SIP).

14. Method according to one of claims 1 to 6 characterized in that a "HyperText Markup Language (HTML)", an "EXtensible Markup Language (XML)", a "WAP (Wireless Application Protocol) Markup Language (WML)" or a "Synchronized Multimedia Integration Language (SMIL)" is used as the presentation format for the presentation message (PN) and the service message generating template (SNEV).

15. Method according to one of claims 1 to 4 characterized in

that an "EXtensible Style Sheet Language Transformation (XSLT) is used for generating the configuration profile (KFP).

16. Method according to one of claims 1 to 4 characterized in that registering of the terminal (EG) with the server (SV, SV2) is performed offline directly with the operator of the server (SV, SV2) by entering the fixed/mobile network-specific network address (NAD) on the server (SV, SV2) and/or by registering and logging on via WEB forms, with the server (SV, SV2) keeping track of the current status by registering the legitimacy, storing the terminal user's personal profile, storing the terminal's type and characteristics, and storing the terminal user's personal preferences in terms of presenting and interacting.

17. Method according to one of claims 1 to 4 characterized in that a "Multimedia Message Service Center (MMSC)" which forwards an MMS-specific "Protocol Data Unit (PDU)" to the server (SV, SV1) using the server/service center-specific protocol (SMTP, MM1...MM7), a "Short Message Service Center (MMSC)" which forwards an SMS-specific "Protocol Data Unit (PDU)" to the server (SV, SV1) using the server/service center-specific protocol (SMTP, MM1...MM7), an "Instant Messaging Service Center (IMSC)" which forwards "instant messages" to the server (SV, SV1) using an SIP redirector (SIP-U), an "Electronic Mail Service Center (EMailSC)" which forwards e-mails to the server (SV, SV1) using the server/service center-specific protocol (SMTP), and/or a "Voice Mail Service Center (VMailSC)" which accepts voice mails as e-mails or, as a gateway, accepts calls and forwards them to the server (SV, SV1) as e-mails or SIP messages, are used as the service center (SZ1...SZ5).

18. Method according to one of claims 1 to 17 characterized in

that an editing unit (ABE) of the server (SV, SV2) also accepts any annexes, referred to as "attachments", to the message content of the service message (SN) and converts them into a graphic format supported by the terminal (EG), with said editing unit (ABE) recognizing the files added as an attachment from the respective ending of the ID code, provisioning a suitable processing program for the respective file type, which program incorporates a device driver for output in a specific graphic format, and, via said program, converting the respective file into a suitable format for the terminal (EG).

19. Method according to claim 1 or 3 characterized in that the structure information (SIF) obtained from the analysis allows compilations to be produced, the modality of media to be changed, for example a video clip to be converted into a series of semantically relevant single images, and/or individual segments to be selectively accessed when analyzed media content, for example audio/video clips, is being retrieved.

20. Method according to claim 1, 3 or 19 characterized in that the media content is analyzed in terms of secondary information such as, for example, the author and the time and place of recording, and in that metadata generated during said process is assigned to the structure information (SIF).

21. Method according to claim 1, 3, 19 or 20 characterized in that the structure information (SIF) is described and coded in MPEG-7 format.

22. Method according to claim 1 or 3 characterized in that the notification message (MN) is embodied or, as the case may be, configured in accordance with the terminal user's wishes.

23. Method according to claim 1, 3 or 22 characterized in that

the notification message (MN) is transmitted to the server (SV, SV2) while the terminal (EG) is logging on to the server (SV, SV2) or at any later time, and/or in that the presentation message (PN) is retrieved from the notification message (MN).

24. Method according to claim 1, 3, 22 or 23 characterized in that a set-top box (STB) in conjunction with a television set (FA, FBS) is used as the terminal (EG) and the notification message (MN) is presented directly during the television program in progress.

25. Method according to claim 1, 3, 22, 23 or 24 characterized in that the notification message (MN) already contains elements of the service message (SN) and has the form and function of an "instant message".

26. Method according to claim 24 characterized in that when the notification message (MN) is presented in a manner filling a television screen (FBS) the television program in progress will automatically be recorded in the manner of "time-shifted viewing" then resumed without interruption when the notification has been acknowledged.

27. Method according to claim 1 or 3 characterized in that if the session is interrupted the server (SV, SV2) will keep track of the status of message retrieving through transmitting of the retrieval request (AAF) by the terminal (EG) by storing the status so that the session can be resumed at a later time.

28. Method according to one of claims 1 to 4 or according to claim 10 characterized in that the retrieved presentation message (PN) is outputted in the terminal (EG) by means of a processing unit (VAE) having an installed "WEB browser" module (WBM).

29. Method according to claim 10 characterized in that the personal computer (PC), the smart telephone (STF), and the "Personal Digital Assistant" (PDA) is provided with a universal interface to the packet-oriented connection (V2, V3), for example "Universal Plug and Play (UPnP)", via which the devices are connected in accordance with a packet-oriented short-range radio or line-linked connection protocol (Bluetooth, WLAN) either directly to the server (SV2) or indirectly to the server (SV, SV2) by the base station (BS) or set-top box (STB).

30. Method according to claim 28 characterized in that the processing unit (VAE) of the terminal (EG) is assigned a message receiver module (MEM), referred to as a "listener", which opens a TCP/IP port in order to receive the notification message (MN) and which controls outputting of the notification message (MN) and the "WEB browser" module (WBM).

31. Method according to claim 30 characterized in that the message receiver module (MEM) of the terminal (EG) is assigned an "SIP client" functionality by means of which the terminal (EG) registers with and logs on to the server (SV, SV2) in accordance with the "Session Initiation Protocol" and receives the notification message (MN) as an "SIP message".

32. Method according to claim 14 characterized in that the service message generating template (SNEV) is compiled from a form or from an "applet" that can be executed on the terminal (EG) and an augmenting "template", with said "template" being completed during editing by the user of the terminal (EG) controlled by a WEB form.

33. Method according to claim 24 characterized in that the display of the presentation message (PN) and notification

message (MN) on the television screen (FBS) is subdivided into 4 quadrants, with the content of the message archive being displayed in a first quadrant (Q1) and the television program in progress being displayed in a second quadrant (Q2), while the respective message text and the current media element, for example an image or video, are displayed in a third quadrant (Q3) and a fourth quadrant (Q4).

34. Method according to claim 24 and 33 characterized in that the set-top box (STB) is assigned vertical and horizontal cursor keys or softkeys and a remote control instrument (FBI) having an OK key embodied as a key or softkey, with said vertical cursor keys or softkeys being used to navigate in the message archive, with said OK key being used to select a message, and with said horizontal cursor keys or softkeys being used to change between the quadrants (Q1...Q4).

35. Method according to claim 34 characterized in that a television remote control unit or a computer keyboard is used as the remote control instrument (FBI).

36. Server for transmitting service messages in a fixed and/or mobile network wherein a service message (SN) intended for a terminal (EG) as the addressee is available in a service center (SZ1...SZ5), having the following features:

- a) A service center/server interface "SS interface" (SS-S) can be connected to the service center (SZ1...SZ5) via a packet-switched first connection (V1),
- b) a server/terminal interface "SE interface" (SE-S) can be connected to a terminal (EG) via a packet-switched second connection (V2), with the terminal (EG) and the server (SV) forming a communication system (KS),
- c) an editing unit (ABE) controlling the system communication of the communication system is connected to the SE interface

(SE-S) and a user database (NDB) and the SE interface (SE-S), user database (NDB), and editing unit (ABE) are embodied in such a way that a fixed/mobile network-specific network address (NAD) notified by the terminal (EG), registered with the server (SV), of the editing unit (ABE) is forwarded to the service center (SZ1....SZ5) by the editing unit (ABE) and stored in the user database (NDB) and the terminal (EG) receives an access authorization (ZGB) from the editing unit (ABE) as a result of the notified network address (NAD),

d) the SE interface (SE-S) is embodied in such a way that alongside a communication system address (KSAD) notified by the terminal (EG) registered with the server (SV) the SE interface (SE-S) conveys to the editing unit (ABE) device information (GEI) and control information (STIF) notified by the terminal (EG) for server-side parameterizing and configuring of the communication system (KS) and system communication, which unit stores the communication system address (KSAD) in the user database (NDB),

e) the SS interface (SS-S) is embodied in such a way that it accepts the service message (SN) from the service center (SZ1...SZ5) in accordance with a pre-specified server/service center-specific transmission protocol (SMTP, MM1...MM7),

f) the editing unit (ABE) is embodied in such a way (SNAM, MNEM, KFM, MAM, WSM) that terminal-specific parameterizing of terminal-specific configuration templates (KFV) stored in a "style sheet" archive (SSA) is performed using the device information (GIF) and by means of the control information (STIF) and a terminal-specifically parameterized configuration profile (KFP), referred to as a "style sheet", is generated which is stored in the user database (NDB),

g) the editing unit (ABE, SNAM, MNEM, KFM, MAM, WSM), the SE interface (SE-S), and the SS interface (SS-S) are embodied and interconnected in such a way that the service message (SN) accepted from the service center (SZ1...SZ5) is stored in a

service message memory (SNS), the service message accepted from the service center (SZ1...SZ5) is disassembled into its individual components, its structure and/or the respective semantic meaning of the components is analyzed, the results obtained are stored as formatted structure information (SIF), the addressee of the service message (SN) is identified, and a notification message (MN) is sent via the SE interface (SE-S) to the identified addressee or, as the case may be, terminal (EG) to notify him/her/it of the received service message (SN) with an addressing scheme (URL) for collecting the content of the service message (SN) stored on the server (SV),

h) the SE interface (SE-S) is embodied in such a way that a retrieval request (AAF) conveyed from the terminal (EG), with which request the terminal (EG) retrieves the content of the stored service message (SN) from the server (SV) according to the addressing scheme (URL) in the notification message (MN), is forwarded to the editing unit (ABE, SNAM, MNEM, KFM, MAM, WSM),

i) the editing unit (ABE, SNAM, MNEM, KFM, MAM, WSM) is embodied in such a way that a presentation message (PN) based on a pre-specified presentation format is produced from the service message (SN) by reason of the received retrieval request (AAF) using the formatted structure information (SIF) and the terminal-specific configuration profile (KFP), and said presentation message (PN) is transmitted via the SE interface (SE-S) to the terminal (EG), where the received presentation message (PN) is presented acoustically, graphically, and/or optically.

37. Server for transmitting service messages in a fixed and/or mobile network wherein a terminal (EG) has, as the sender, generated a message content of a service message (SN) intended for a subscriber in the fixed and/or mobile network, having the following features:



- a) A service center/server interface "SS interface" (SS-S) can be connected to the service center (SZ1...SZ5) via a packet-switched first connection (V1),
- b) a server/terminal interface "SE interface" (SE-S) can be connected to a terminal (EG) via a packet-switched second connection (V2), with the terminal (EG) and the server (SV) forming a communication system (KS),
- c) an editing unit (ABE) controlling the system communication of the communication system (KS) is connected to the SE interface (SE-S) and a user database (NDB) and the SE interface (SE-S), the user database (NDB), and the editing unit (ABE) are embodied in such a way that a fixed/mobile network-specific network address (NAD) notified by the terminal (EG), registered with the server (SV), of the editing unit (ABE) is forwarded to the service center (SZ1....SZ5) by the editing unit (ABE) and stored in the user database (NDB) and the terminal (EG) receives an access authorization (ZGB) from the editing unit (ABE) as a result of the notified network address (NAD),
- d) the SE interface (SE-S) and editing unit (ABE) are embodied in such a way that the SE interface (SE-S) conveys to the editing unit (ABE) a communication system address (KSAD) notified by the terminal (EG) registered with the server (SV) and likewise notified device information (GIF), and the editing unit (ABE) stores the communication system address (KSAD) in the user database (NDB),
- e) the editing unit (ABE) and the SE interface (SE-S) are embodied and interconnected in such a way that a service message generating template (SNEV), based on a pre-specified presentation format, for generating the service message (SN) is produced using the device information (GIF), and said service message generating template (SNEV) is transmitted via the SE interface (SE-S) to the terminal (EG),
- f) the SE interface (SE-S) is embodied in such a way that the service message generating template (SNEV), augmented with the

message content, conveyed by the terminal (EG) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP) is forwarded to the editing unit (ABE),  
g) the editing unit (ABE) and SS interface (SS-S) are embodied and interconnected in such a way that the editing unit (ABE) generates the service message (SN) from the service message generating template (SNEV) furnished with the message content and said service message (SN) intended for the subscriber in the fixed and/or mobile network is transmitted via the SS interface (SS-S) to the service center (SZ1...SZ5).

38. Server for transmitting service messages in a fixed and/or mobile network wherein a service message (SN) intended for a terminal (EG) as the addressee is available in a service center (SZ1...SZ5), having the following features:

- a) A server/server interface "SS interface" (SS-S) is connected via a packet-switched second connection (V2) to a further server (SV1) which is connected via a packet-switched first connection (V1) to the service center (SZ1...SZ5), with the further server (SV1) and the server (SV2) forming a first communication system (KS1),
- b) a server/terminal interface "SE interface" (SE-S) can be connected to the terminal (EG) via a packet-switched third connection (V3), with the terminal (EG) and the server (SV2) forming a second communication system (KS2),
- c) an editing unit (ABE) controlling the system communication of the second communication system (KS2) is connected to the SS interface (SS-S) and a user database (NDB) and the SS interface (SS-S), the user database (NDB), and the editing unit (ABE) are embodied in such a way that the editing unit (ABE) registers the server (SV2) via the SS interface (SS-S) with the further server (SV1) and, when doing so, notifies said server of a fixed/mobile network-specific network address (NAD) which is stored by the further server (SV1) and forwarded to the service

center (SZ1...SZ5), and in that the editing unit (ABE), in response, receives an access authorization (ZGB) from the further server (SV1) via the SS interface (SS-S),

d) the SS interface (SS-S) and editing unit (ABE) are embodied in such a way that the server (SV2) is registered with the further server (SV1) and a first communication system address (KSAD1) is transmitted to the further server (SV1), which address is stored in the further server (SV1),

e) the SS interface (SS-S) is embodied in such a way that it receives the service message (SN) from the further server (SV1) and forwards it to the editing unit (ABE), with the further server (SV1) accepting the service message (SN) from the service center (SZ1...SZ5) in accordance with a pre-specified server/service center-specific transmission protocol (SMTP, MM1...MM7),

f) the editing unit (ABE) is connected to a service message memory (SNS) and embodied in such a way that it stores the forwarded service message (SN) in the service message memory (SNS),

g) the SE interface (SE-S) is embodied in such a way that, alongside a second communication system address (KSAD2) notified by the terminal (EG) logged on to the server (SV2), the SE interface (SE-S) conveys device information (GIF) and control information (STIF) notified by the terminal (EG) for server-side parameterizing and configuring of the second communication system (KS2) and system communication to the editing unit (ABE), which stores the second communication system address (KSAD2) in the user database (NDB),

h) the editing unit (ABE) is embodied in such a way (SNAM, MNEM, KFM, MAM, WSM) that terminal-specific parameterizing of terminal-specific configuration templates (KFV) stored in a "style sheet" archive (SSA) is performed using the device information (GIF) and by means of the control information (STIF) and a terminal-specifically parameterized configuration

profile (KFP), referred to as a "style sheet", is generated which is stored in the user database (NDB),

i) the editing unit (ABE, SNAM, MNEM, KFM, MAM, WSM), the SE interface (SE-S), and the SS interface (SS-S) are embodied and interconnected in such a way that the stored service message (SN) is disassembled into its individual components, its structure and/or the respective semantic meaning of the components is analyzed, the results obtained are stored as formatted structure information (SIF), the addressee of the service message (SN) is identified, and a notification message (MN) is sent via the SE interface (SE-S) to the identified addressee or, as the case may be, terminal (EG) to notify him/her/it of the received service message (SN) with an addressing scheme (URL) for collecting the content of the service message (SN) stored on the server (SV2),

j) the SE interface (SE-S) is embodied in such a way that a retrieval request (AAF) conveyed from the terminal (EG), with which request the terminal (EG) retrieves the content of the stored service message (SN) from the server (SV2) according to the addressing scheme (URL) in the notification message (MN), is forwarded to the editing unit (ABE, SNAM, MNEM, KFM, MAM, WSM),

k) the editing unit (ABE, SNAM, MNEM, KFM, MAM, WSM) is embodied in such a way that a presentation message (PN) based on a pre-specified presentation format is produced from the service message (SN) by reason of the received retrieval request (AAF) using the formatted structure information (SIF) and the terminal-specific configuration profile (KFP), and said presentation message (PN) is transmitted via the SE interface (SE-S) to the terminal (EG), where the received presentation message (PN) is presented acoustically, graphically, and/or optically.

39. Server for transmitting service messages in a fixed and/or

mobile network wherein a terminal (EG) has, as the sender, generated a message content of a service message (SN) intended for a subscriber in the fixed and/or mobile network, having the following features:

a) A server/server interface "SS interface" (SS-S) is connected via a packet-switched second connection (V2) to a further server (SV1) which is connected via a packet-switched first connection (V1) to the service center (SZ1...SZ5), with the further server (SV1) and the server (SV2) forming a first communication system (KS1),

b) a server/terminal interface "SE interface" (SE-S) can be connected to the terminal (EG) via a packet-switched third connection (V3), with the terminal (EG) and the server (SV2) forming a second communication system (KS2),

c) an editing unit (ABE) controlling the system communication of the second communication system (KS2) is connected to the SE interface (SE-S) and a user database (NDB) and the SE interface (SE-S), the user database (NDB) and the editing unit (ABE) are embodied in such a way that the editing unit (ABE) registers the server (SV2) via the SS interface (SS-S) with the further server (SV1) and, when doing so, notifies said server of a fixed/mobile network-specific network address (NAD) which is stored by the further server (SV1) and forwarded to the service center (SZ1...SZ5), and in that the editing unit (ABE), in response, receives an access authorization (ZGB) from the further server (SV1) via the SS interface (SS-S),

d) the SS interface (SS-S) and editing unit (ABE) are embodied in such a way that the server (SV2) is logged on to the further server (SV1) and a first communication system address (KSAD1) is transmitted to the further server (SV1), which address is stored in the further server (SV1),

e) the SE interface (SE-S) is embodied in such a way that, alongside a second communication system address (KSAD2) notified by the terminal (EG) logged on to the server (SV2),

the SE interface (SE-S) conveys to the editing unit (ABE) device information (GIF) notified by the terminal (EG) and the editing unit (ABE) stores the second communication system address (KSAD2) in the user database (NDB),

f) the editing unit (ABE) and the SE interface (SE-S) are embodied and interconnected in such a way that a service message generating template (SNEV), based on a pre-specified presentation format, for generating the service message (SN) is produced using the device information (GIF), and said service message generating template (SNEV) is transmitted via the SE interface (SE-S) to the terminal (EG),

g) the SE interface (SE-S) is embodied in such a way that the service message generating template (SNEV), augmented with the message content, conveyed by the terminal (EG) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP) is forwarded to the editing unit (ABE),

h) the editing unit (ABE) and SS interface (SS-S) are embodied and interconnected in such a way that the editing unit (ABE) generates the service message (SN) from the service message generating template (SNEV) furnished with the message content and said service message (SN) intended for the subscriber in the fixed and/or mobile network is transmitted via the SS interface (SS-S) to the further server (SV1), which forwards the service message (SN) to the service center (SZ1...SZ5).

40. Server according to claim 36 characterized in that the terminal (EG) has, as the sender, generated a message content of a further service message (SN) intended for a subscriber in the fixed and/or mobile network, wherein

a) the editing unit (ABE) and SE interface (SE-S) are embodied and interconnected in such a way that a service message generating template (SNEV), based on a pre-specified presentation format, for generating the service message (SN) is produced using the device information (GIF), and said service

message generating template (SNEV) is transmitted via the SE interface (SE-S) to the terminal (EG),

b) the SE interface (SE-S) is embodied in such a way that the service message generating template (SNEV), augmented with the message content, conveyed by the terminal (EG) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP) is forwarded to the editing unit (ABE),

c) the editing unit (ABE) and SS interface (SS-S) are embodied and interconnected in such a way that the editing unit (ABE) generates the service message (SN) from the service message generating template (SNEV) furnished with the message content and said service message (SN) intended for the subscriber in the fixed and/or mobile network is transmitted via the SS interface (SS-S) to the service center (SZ1...SZ5).

41. Server according to claim 38 characterized in that the terminal (EG) has, as the sender, generated a message content of a further service message (SN) intended for a subscriber in the fixed and/or mobile network, wherein

a) the editing unit (ABE) and the SE interface (SE-S) are embodied and interconnected in such a way that a service message generating template (SNEV), based on a pre-specified presentation format, for generating the service message (SN) is produced using the device information (GIF), and said service message generating template (SNEV) is transmitted via the SE interface (SE-S) to the terminal (EG),

b) the SE interface (SE-S) is embodied in such a way that the service message generating template (SNEV), augmented with the message content, conveyed by the terminal (EG) in accordance with a pre-specified server-/terminal-specific transmission protocol (HTTP, SIP) is forwarded to the editing unit (ABE),

c) the editing unit (ABE) and SS interface (SS-S) are embodied and interconnected in such a way that the editing unit (ABE) generates the service message (SN) from the service message

generating template (SNEV) furnished with the message content and said service message (SN) intended for the subscriber in the fixed and/or mobile network is transmitted via the SS interface (SS-S) to the further server (SV1), which forwards the service message (SN) to the service center (SZ1...SZ5).

42. Server according to claim 38, 39 or 41 characterized in that the server (SV2) is integrated in the terminal (EG) for forming a structural and functional unit.

43. Server according to one of claims 36 to 39 characterized in that the connections (V1, V2, V3) are embodied in such a way that a "Transmission Control Protocol/Internet Protocol (TCP/IP)" is handled via them.

44. Server according to claim 43 characterized in that the network address (NAD) is a telephone number, an e-mail address, a "Session Initiation Protocol (SIP)" address etc. in the sense of a "Universal Resource Identifier (URI)" and the communication system address (KSAD, KSAD1, KSAD2) is an IP address.

45. Server according to one of claims 36 to 39 or according to claim 7 characterized in that the terminal (EG) is embodied as a set-top box (STB) in conjunction with a television set (FA), with a smart telephone (STF) and/or with a "Personal Digital Assistant" (PDA), a cordless base station (BS) embodied as an "access point" in conjunction with a personal computer (PC), with a smart telephone (STF), with a "Personal Digital Assistant" (PDA) and/or with a set-top box having a connected television set (FA), a personal computer (PC), a smart telephone (STF) or a "Personal Digital Assistant" (PDA).

46. Server according to one of claims 36 to 39 characterized in



that the device information (GIF) includes information concerning the type, characteristics and/or features of the terminal (EG).

47. Server according to one of claims 36 to 39 characterized in that the control information (STIF) contains a password, information concerning the type and scope of a notification message (MN), a personal profile of the terminal user and/or personal preferences of the terminal user.

48. Server according to one of claims 36 to 39 characterized in that the server/service center-specific protocol (SMTP, MM1...MM7) is a "Simple Mail Transfer Protocol (SMTP)" and the server-/terminal-specific protocol (HTTP, SIP) is a "HyperText Transfer Protocol (HTTP)" or "Session Initiation Protocol (SIP)".

49. Server according to one of claims 36 to 39 characterized in that the presentation format for the presentation message (PN) and the service message generating template (SNEV) is a "HyperText Markup Language (HTML)", an "EXtensible Markup Language (XML)", a "WAP (Wireless Application Protocol) Markup Language (WML)" or a "Synchronized Multimedia Integration Language (SMIL)".

50. Server according to one of claims 36 to 39 characterized in that for generating the configuration profile (KFP) the configuration profile (KFP) contains an "EXtensible Style Sheet Language Transformation (XSLT)".

51. Server according to one of claims 36 to 39 characterized in that the fixed/mobile network-specific network address (NAD) is stored in the server (SV, SV2) during registration so that registering of the terminal (EG) with the server (SV1, SV2) can

be performed offline directly with the operator of the server (SV, SV2).

52. Server according to one of claims 36 to 39 characterized in that the service center (SZ1...SZ5) is embodied as a "Multimedia Message Service Center (MMSC)" which forwards an MMS-specific "Protocol Data Unit (PDU)" to the server (SV, SV1) using the server/service center-specific protocol (SMTP, MM1...MM7), a "Short Message Service Center (MMSC)" which forwards an SMS-specific "Protocol Data Unit (PDU)" to the server (SV, SV1) using the server/service center-specific protocol (SMTP, MM1...MM7), an "Instant Messaging Service Center (IMSC)" which forwards "instant messages" to the server (SV, SV1) using an SIP redirector (SIP-U), an "Electronic Mail Service Center (EMailSC)" which forwards e-mails to the server (SV, SV1) using the server/service center-specific protocol (SMTP), and/or a "Voice Mail Service Center (VMailSC)" which accepts voice mails as e-mails or, as a gateway, accepts calls and forwards them to the server (SV, SV1) as e-mails or SIP messages.

53. Server according to one of claims 36 to 52 characterized in that the editing unit (ABE) is embodied in such a way that it also accepts any annexes, referred to as "attachments", to the message content of the service message (SN) and converts them into a graphic format supported by the terminal (EG), with said editing unit (ABE) recognizing the files added as an attachment from the respective ending of the ID code, provisioning a suitable processing program for the respective file type, which program incorporates a device driver for output in a specific graphic format, and, via said program, converting the respective file into a suitable format for the terminal (EG).

54. Server according to claim 36 or 38 characterized in that

the editing unit (ABE) is embodied in such a way that the structure information (SIF) obtained from the analysis allows compilations to be produced, the modality of media to be changed, for example a video clip to be converted into a series of semantically relevant single images, and/or individual segments to be selectively accessed when analyzed media content, for example audio/video clips, is being retrieved.

55. Server according to claim 36, 38 or 54 characterized in that the structure information (SIF) contains metadata obtained from the analysis of the media content in terms of secondary information such as, for example, the author and the time and place of recording.

56. Server according to claim 36, 38, 53, 54 or 55 characterized in that the structure information (SIF) is MPEG-7 data.

57. Server according to claim 36 or 38 characterized in that the editing unit (ABE) is embodied in such a way that the notification message (MN) can be configured in accordance with the terminal user's wishes.

58. Server according to claim 36, 38 or 57 characterized in that the editing unit (ABE) is embodied in such a way that the notification message (MN) can be transmitted to the server (SV, SV2) while the terminal (EG) is logging on to the server (SV, SV2) or at any later time.

59. Server according to claim 36, 38, 57 or 58 characterized in that the editing unit (ABE) is embodied in such a way that when the terminal (EG) is embodied as a set-top box (STB) in conjunction with a television set (FA) the notification message (MN) can be presented directly while the television program is

in progress.

60. Server according to claim 36, 38, 57, 58 or 59 characterized in that the editing unit (ABE) is embodied in such a way that the notification message (MN) already contains elements of the service message (SN) and has the form and function of an "instant message".

61. Server according to claim 36 or 38 characterized in that the editing unit (ABE) is embodied in such a way that the status of message retrieving through transmitting of the retrieval request (AAF) by the terminal (EG) will be kept track of if the session is interrupted by storing the status so that the session can be resumed at a later time.

62. Server according to one of claims 36 to 39 characterized in that the server/service center interface (SS-S) embodied preferably as an "SMTP client" or "MM1...MM7 client" for sending/receiving the service message (SN), the network address (NAD), and the first communication system address (KSAD1), the server/terminal interface (SE-S) embodied preferably as an "HTTP client" or "SIP client" for sending/receiving the notification message (MN), the presentation message (PN), the service message generating template (SNEV), the device information (GIF) and the control information (STIF), the service message memory (SNS), the "style sheet" archive (SSA), the user database (NDB), and a template archive (VA) for format templates forming the basis for producing the service message generating templates (SNEV) are assigned to the editing unit (ABE) and in that the editing unit (ABE) has a "WEB server" module (WSM) for producing the retrieved presentation message (PN) and provisioning WEB forms for registering and logging on the terminal (EG), a configuration module (KFM) for producing presentations from the structure information (SIF) and

configuration profile (KFP), a media adaption module (MAM) for processing media data, in particular for changing image sizes, converting image, audio, and video formats, and changing modalities, for example speech-to-text, a notification message generating module (MNEM) for generating the notification message (MN), a template producing module (VEM) for producing the service message generating template (SNEV), and a service message generating module (SNEM) for generating the service message (SN) from the completed service message generating template (SNEV), which are connected to each other according to the representation in FIGURES 10 and 11.

63. Terminal for transmitting service messages in a fixed and/or mobile network wherein a service message (SN) intended for the terminal (EG) as the addressee is available in a service center (SZ1...SZ5), having the following features:
- a) A server/terminal interface "SE interface" (SE-S) can be connected via a packet-switched connection (V2, V3) to a server (SV, SV2), with the terminal (EG) and the server (SV, SV2) forming a communication system (KS, KS2) and the server (SV, SV2) being connected directly or indirectly, via a further server (SV1), to the service center (SZ1...SZ5) for accepting the service message (SN) in accordance with a pre-specified server/service center-specific transmission protocol (SMTP, MM1...MM7),
  - b) a processing unit (VAE) controlling the system communication of the communication system (KS, KS2) is connected to the SE interface (SE-S) and the SE interface (SE-S) and processing unit (VAE) are embodied in such a way that the terminal (EG) registers with the server (SV, SV2), notifies the server (SV, SV2) of a fixed/mobile network-specific network address (NAD) and receives an access authorization (ZGB) from the server (SV, SV2) as a result of the notified network address (NAD),
  - c) the SE interface (SE-S) and processing unit (VAE) are

embodied in such a way that the terminal (EG) logs on to the server (SV, SV2), alongside a communication system address (KSAD, KSAD2) for server-side parameterizing and configuring of the communication system (KS, KS2) and system communication, device information (GIF) and control information (STIF) is conveyed to the server (SV, SV2), with the server (SV, SV2) performing, using the device information (GIF) and by means of control information (STIF), terminal-specific parameterizing of terminal-specific configuration templates (KFV) stored in the server (SV, SV2) and generating a terminal-specifically parameterized configuration profile (KFP), referred to as a "style sheet", and storing this together with the communication system address (KSAD, KSAD2),

d) the SE interface (SE-S) is embodied in such a way that the SE interface (SE-S) receives a notification message (MN) with an addressing scheme (URL) for collecting the content of the service message (SN) stored on the server (SV, SV2) and forwards said notification message (MN) to the processing unit (VAE),

e) the SE interface (SE-S) and processing unit (VAE) are embodied in such a way that a retrieval request (AAF), with which the terminal (EG) retrieves the content of the stored service message (SN) from the server (SV, SV2) according to the addressing scheme (URL) in the notification message (MN), is transmitted to the server (SV, SV2),

f) the SE interface (SE-S), the processing unit (VAE), and an output device (FA, FBS) are embodied and interconnected in such a way that the SE interface (SE-S) receives a presentation message (PN) based on a pre-specified presentation format and produced from the service message (SN) by the server (SV, SV2) on the basis of the retrieval request (AAF) using the formatted structure information (SIF) and the terminal-specific configuration profile (KFP), forwards said presentation message (PN) to the processing unit (VAE), and the processing unit

(VAE) conveys the received presentation message (PN) to the output device (FA, FBS) for acoustic, graphical, and/or optical presentation.

64. Terminal for transmitting service messages in a fixed and/or mobile network wherein the terminal (EG) has, as the sender, generated a message content of a service message (SN) intended for a subscriber in the fixed and/or mobile network, having the following features:

- a) A server/terminal interface "SE interface" (SE-S) can be connected via a packet-switched connection (V2, V3) to a server (SV, SV2), with the terminal (EG) and the server (SV, SV2) forming a communication system (KS, KS2) and the server (SV, SV2) being connected directly or indirectly, via a further server (SV1), to the service center (SZ1...SZ5),
- b) a processing unit (VAE) controlling the system communication of the communication system (KS, KS2) is connected to the SE interface (SE-S) and the SE interface (SE-S) and processing unit (VAE) are embodied in such a way that the terminal (EG) registers with the server (SV, SV2), notifies the server (SV, SV2) of a fixed/mobile network-specific network address (NAD) and receives an access authorization (ZGB) from the server (SV, SV2) as a result of the notified network address (NAD),
- c) the SE interface (SE-S) and processing unit (VAE) are embodied in such a way that the terminal (EG) logs on to the server (SV, SV2) and, alongside a communication system address (KSAD, KSAD2), device information (GIF) is conveyed to the server (SV, SV2), with the communication system address (KSAD, KSAD2) being stored in the server (SV2, SV2),
- d) the SE interface (SE-S) is embodied in such a way that the SE interface (SE-S) receives a service message generating template (SNEV) for generating the service message (SN), which template is based on a pre-specified presentation format and produced by the server (SV, SV2) using the device information

(GIF), and forwards said template to the processing unit (VAE), f) the SE-S interface (SE-S), processing unit (VAE), and input means (FBI) are interconnected and embodied in such a way that the service message generating template (SNEV) is completed by means of the input means (FBI) using the generated message content of the service message (SN) and the completed service message generating template (SNEV) is transmitted to the server (SV, SV2) in accordance with a server-/terminal-specific transmission protocol (HTTP, SIP), with the service message (SN) being generated in the server (SV, SV2) from the service message generating template (SNEV) furnished with the message content and said service message (SN) intended for the subscriber in the fixed and/or mobile network being transmitted to the service center (SZ1...SZ5).

65. Terminal according to claim 63 characterized in that the processing unit (VAE) is embodied in such a way that when the terminal (EG) is embodied as a set-top box (STB) in conjunction with a television set (FA), the television program in progress will automatically be recorded in the manner of "time-shifted viewing" when the notification message (MN) is presented in a manner filling the television screen (FBS), then resumed without interruption when the notification has been acknowledged.

66. Terminal according to claim 63 or 65 characterized in that the processing unit (VAE) has a "WEB browser" module (WBM) controlling the output of the retrieved presentation message (PN) on the output device (FA, FBS).

67. Terminal according to claim 63 or 64 characterized in that the terminal (EG) is embodied as a set-top box (STB) in conjunction with a television set (FA), with a smart telephone (STF) and/or with a "Personal Digital Assistant" (PDA), a



cordless base station (BS) embodied as an "access point" in conjunction with a personal computer (PC), with a smart telephone (STF), with a "Personal Digital Assistant" (PDA) and/or with a set-top box having a connected television set (FA), a personal computer (PC), a smart telephone (STF) or a "Personal Digital Assistant" (PDA) or in that the terminal (EG) is embodied as a set-top box (STB) in conjunction with a television set (FA), with a smart telephone (STF) and/or with a "Personal Digital Assistant" (PDA), a cordless base station (BS) embodied as an "access point" in conjunction with a personal computer (PC), with a smart telephone (STF), with a "Personal Digital Assistant" (PDA) and/or with a set-top box having a connected television set (FA), a personal computer (PC), a smart telephone (STF) or a "Personal Digital Assistant" (PDA) and the personal computer (PC), the smart telephone (STF) and "Personal Digital Assistant" (PDA) has a universal interface to the packet-oriented connection (V2, V3), for example "Universal Plug and Play (UPnP)", via which the devices are connected in accordance with a packet-oriented short-range radio or line-linked connection protocol (Bluetooth, WLAN) either directly to the server (SV2) or indirectly to the server (SV, SV2) by the base station (BS) or set-top box (STB).

68. Terminal according to claim 63 or 66 characterized in that the processing unit (VAE) has a message receiver module (MEM), referred to as a "listener", which opens a TCP/IP port in order to receive the notification message (MN) and which controls outputting of the notification message (MN) and the "WEB browser" module (WBM).

69. Terminal according to claim 68 characterized in that the message receiver module (MEM) has an "SIP client" functionality by means of which the terminal (EG) registers with and logs on to the server (SV, SV2) in accordance with the "Session

Initiation Protocol" and receives the notification message (MN) as an "SIP message".

70. Terminal according to claim 64 characterized in that the processing unit (VAE) is embodied in such a way that the service message generating template (SNEV) is compiled from a form or from an "applet" that can be executed on the terminal (EG) and an augmenting "template", with said "template" being completed during editing by the user of the terminal (EG) controlled by a WEB form conveyed from the server (SV, SV2).

71. Terminal according to claim 63 and 65 characterized in that the output device (FA, FBS) contains a television screen (FBS) subdivided into 4 quadrants, with the content of the message archive being displayed in a first quadrant (Q1) and the television program in progress being displayed in a second quadrant (Q2), while the respective message text and current media element, for example an image or video, is displayed in a third quadrant (Q3) and a fourth quadrant (Q4).

72. Terminal according to claim 63 or 64 and 65 characterized in that the set-top box (STB) is assigned vertical and horizontal cursor keys or softkeys and a remote control instrument (FBI) having an OK key embodied as a key or softkey, with said vertical cursor keys or softkeys being used to navigate in the message archive, with said OK key being used to select a message, and with said horizontal cursor keys or softkeys being used to change between the quadrants (Q1...Q4).

73. Terminal according to claim 72 characterized in that the remote control instrument (FBI) is embodied as a television remote control unit or a computer keyboard.

74. Terminal according to claim 63, 66 or 68 characterized in

that the processing unit (VAE) is embodied in such a way that the presentation message (PN) can be retrieved directly from the received notification message (MN).